A.D. 1869, 5th JANUARY. N° 25.

Paddle Wheels.

LETTERS PATENT to Samuel Bateman, of Asnière, near Paris, in the Empire of France, Manufacturer, for the Invention of "IMPROVEMENTS IN PADDLE WHEELS."

Sealed the 22nd June 1869, and dated the 5th January 1869.

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PROVISIONAL SPECIFICATION left by the said Samuel Bateman at the Office of the Commissioners of Patents, with his Petition, on the 5th January 1869.

I, SAMUEL BATEMAN, of Asnière, near Paris, in the Empire of France, Manufacturer, do hereby declare the nature of the said Invention for "IMPROVEMENTS IN PADDLE WHEELS," to be as follows, that is to say:—

My Invention consists in placing round the wheels for moving vessels and other floating bodies moveable paddles, consisting of two parts united together; one part, placed beyond the axis of oscillation relatively to the centre is the paddle properly so called, it carries a joint at its outer end; the second part placed between the axis of oscillation, and the centre of the wheel has also a joint at its inner end. Each paddle is

jointed to the following one by a connecting rod passing from the inner joint of one paddle to the outer joint of the other, or by any other suitable means. The whole is arranged so that when one paddle is in a radial position the following one is in an inclined position, and reciprocally. The action of the paddles is obtained by means of the resistance of the water.

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said Samuel Bateman in the Great Seal Patent Office on the 5th July 1869.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, SAMUEL BATEMAN, of Asnière, near Paris, in the Empire of France, Manufacturer, send greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Fifth day of January, in the year of our Lord One thousand eight hundred and sixty-nine, in the thirty-second year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said Samuel Bateman, Her special licence that I, the said Samuel Bateman, my executors, administrators, and assigns, or such others as I, the said Samuel Bateman, my executors, administrators, and assigns, should at any time agree with, and no others, from time to time and at all times thereafter during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for "IMPROVEMENTS IN PADDLE WHEELS," upon the condition (amongst others) that I, the said Samuel Bateman, my executors or administrators, by an instrument in writing under , or their, or one of their hands and seals, should particularly describe and ascertain the nature of the said Invention, and in what manner the same was to be performed, and cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent.

NOW KNOW YE, that I, the said Samuel Bateman, do hereby declare the nature of my said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement, reference being had to the Drawing hereto

annexed, and to the figures and letters marked thereon, that is to say:—

My Invention consists in placing round the wheels for moving vessels and other floating bodies moveable paddles, consisting of two parts united together; one part placed beyond the axis of oscillation relatively to the centre is the paddle properly so called, it carries a joint at its outer end; the second part placed between the axis of oscillation, and the centre of the wheel has also a joint at its inner end. Each paddle is jointed to the following one by a connecting rod passing from the inner joint of one paddle to the outer joint of the other, or by any other suitable means. The whole is arranged so that when one paddle is in a radial position the following one is in an inclined position and reciprocally. The action of the paddles is obtained by means of the resistance of the water. By this improved mode of construction of paddle wheels the whole of their working power is made available.

To make the Invention better understood I will proceed to describe it by reference to the accompanying Drawing, in which Figure 1 is a section on the line A^1, B^1, of Figure 2, which is a front elevation of a paddle wheel constructed according to my improvements; and Figures 3 and 4, details of the buffer.

The paddle A, A, properly so called consists of a sheet or plate of metal or wood; it is jointed at C to a shaft M, the ends of which are fixed in a suitable manner to the framework of the wheel R; at the inner end of the wheel each paddle is provided with a prolongation C, D, terminated by a buffer D; at the outer side each paddle is formed with a joint B, united by a connecting rod E to another joint F placed on the prolongation C, D, of the next paddle; all the paddles are thus united one to another, and the length of the rods is so regulated that one paddle is forced to incline in turning on the shaft M. This paddle acts on the two connecting rods E, to which it is jointed at B and F in such a manner as to draw into a radial position the paddle which precedes it and that which follows it. To insure greater firmness to the paddle when under the action of the water it is drawn into this radial position; the buffer D, Figures 3 and 4, made of washers of india-rubber or other elastic material, strikes against an abutment G fixed to the framework of the wheel by means of two cramps H, and by this means the paddle becomes fixed.

Bateman's Improvements in Paddle Wheels.

The action of a wheel thus constructed and set in motion in the water is as follows:—The paddle entering the water in its radial position will incline under the action of the resistance of the water, and will take an oblique direction, the two paddles next it being brought back to their radial position. In continuing its movement the paddle meets with less resistance, and recovers its radial position from the action of the movement of the preceding paddle, which becomes inclined as it passes through the water, and so on for all the paddles.

Having now described the nature of my said Invention, and the manner of performing the same, I wish it to be understood that I do not confine myself to the precise details herein laid down, as they may be varied without departing from the principle of my Invention; but what I claim is,—

Firstly. The improved construction of wheels with moveable paddles arranged and united together in such a manner that one of the paddles becoming inclined by the action of the resistance of the water, the two paddles next it are drawn into their radial or normal position, as herein-before described and represented in the accompanying Drawing.

Secondly. The combination of oscillating paddles furnished with buffers and connecting rods jointed to the next paddles, as herein-before described.

In witness whereof, I, the said Samuel Bateman, have hereto set my hand and seal, this Second day of July One thousand eight hundred and sixty-nine.

SAMUEL BATEMAN. (L.S.)

LONDON:
Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty. 1869.

A.D. 1869, JAN. 5, Nº 25,
BATEMAN'S SPECIFICATION.

FIG. 1.

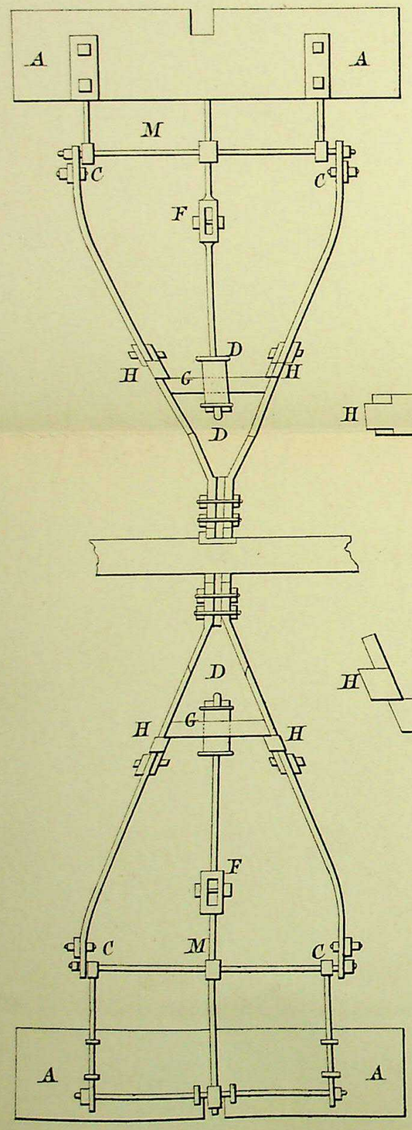


FIG. 3.

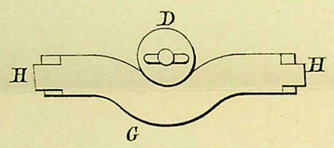


FIG. 4.

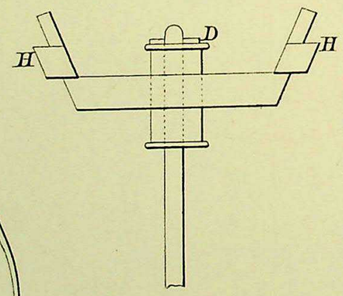
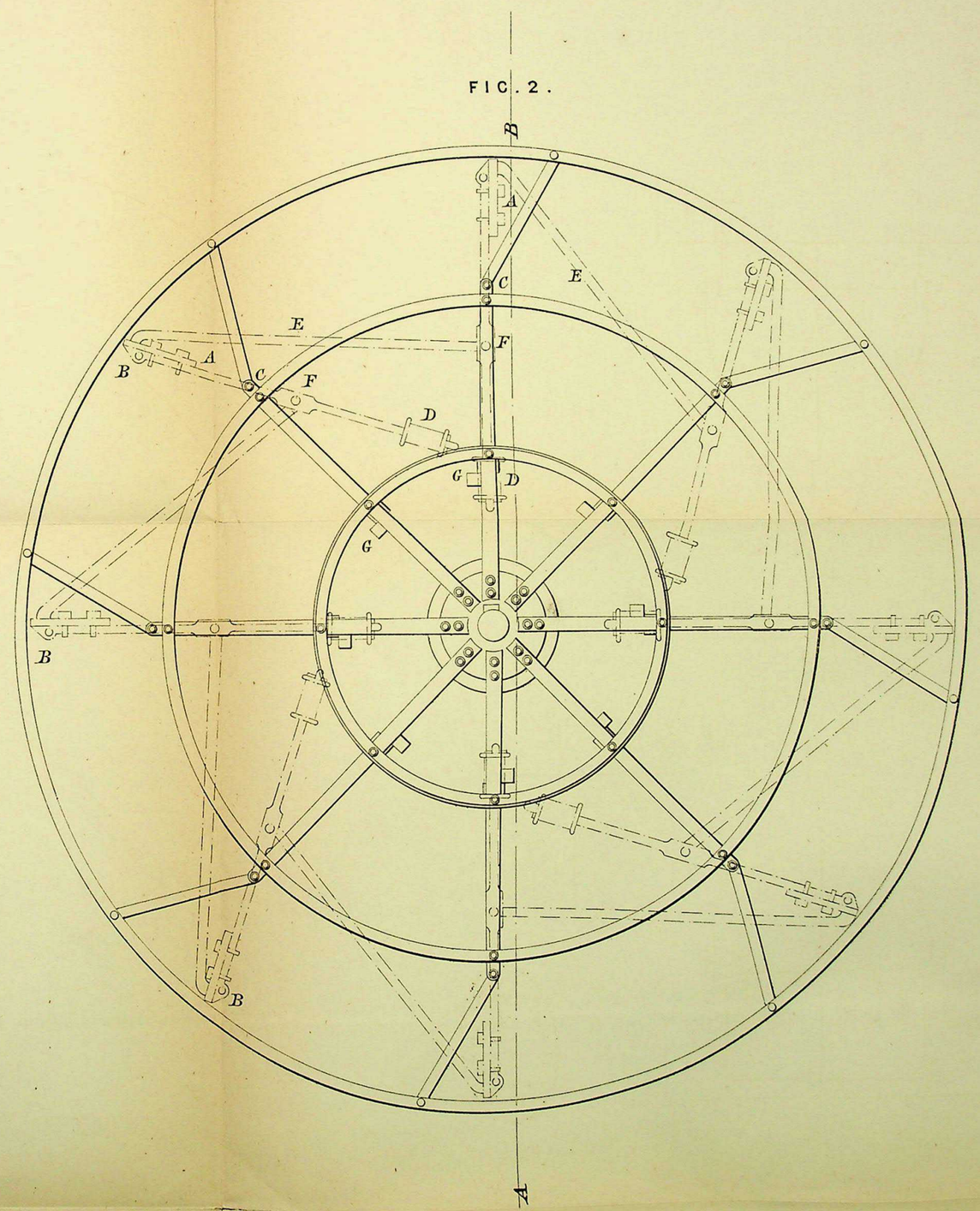


FIG. 2.



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The filed drawing is partly colored.

Drawn on Stone by Malby & Sons.

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